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NOTICE OF ALLOWANCE AND FEE(S) DUE

22116 7590 10/08/2008

SIEMENS CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

EXAMINER

PUENTE, EMERSON C

ART UNIT

PAPER NUMBER

2113

DATE MAILED: 10/08/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,478	12/21/2005	Holger Fehmann	2003P17943WOUS	8165

TITLE OF INVENTION: NETWORK WITH REDUNDANCY PROPERTIES, A BRANCHING UNIT FOR A USER DEVICE IN A NETWORK.
REDUNDANCY MANAGER FOR A NETWORK WITH REDUNDANCY PROPERTIES AND METHOD FOR OPERATING A NETWORK WITH
REDUNDANCY PROPERTIES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	01/08/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

22/16 7590 19/08/2008

SIEMENS CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,478	12/21/2005	Holger Fehrmann	2003P17943WOUS	8165

TITLE OF INVENTION: NETWORK WITH REDUNDANCY PROPERTIES, A BRANCHING UNIT FOR A USER DEVICE IN A NETWORK, REDUNDANCY MANAGER FOR A NETWORK WITH REDUNDANCY PROPERTIES AND METHOD FOR OPERATING A NETWORK WITH REDUNDANCY PROPERTIES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	01/08/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
PUENTE, EMERSON C	2113	714-043000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
 2 _____
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____
 Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.**

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22116	7590	10/08/2008	EXAMINER	
SIEMENS CORPORATION INTELLECTUAL PROPERTY DEPARTMENT 170 WOOD AVENUE SOUTH ISELIN, NJ 08830				
			PUENTE, EMERSON C.	
			ART UNIT	PAPER NUMBER
			2213	
DATE MAILED: 10/08/2008				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 420 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 420 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability**Application No.**

10/561,478

Applicant(s)

FEHRMANN ET AL.

Examiner

EMERSON C. PUENTE

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/15/08.
2. ☒ The allowed claim(s) is/are 18-25, 27-31, and 33-36 (renumbered 1-17).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date ____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other ____.

/Emerson C Puente/
Primary Examiner, Art Unit 2113

DETAILED ACTION

Examiner's Amendment/Comment

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Examiner's Amendment/Comment".

An examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the Issue Fee.

Authorization for this Examiner's Amendment was given in a telephone interview with John Musone (Reg. #44,961) on September 15, 2008.

In regards to claims **27-30**, please replace the limitation "The Branching Unit" (see line 1 of claims) to "The network".

In regards to claim **31**, please change the claim to read:

- " A network having redundancy properties, comprising
- a line including first and second line ends, the first and second line ends connected to a redundancy manager;
- the redundancy manager to:
- disconnect the first and second line ends from each other in an error-free state of the line;

connect the first and second line ends in an error state of the line;
feed a supply voltage into the first or second line end for supplying a user device connected to the network via a branching unit;
feed a further supply voltage to the first line end if the supply voltage is fed to the second line end and is not detected at the first line end after lapse of a predetermined period of time by the redundancy manager;
feed the further supply voltage to the second line end if the supply voltage is fed to the first line end and is not detected at the second line end after lapse of the predetermined period of time by the redundancy manager; and
a plurality of branching units and a recording unit for recording the timely behavior of a voltage or a current related to the supply voltage at the first or second line end during forwarding of the supply voltage by any of the branching units and for determining the number of branching units fed by the supply voltage up to a physical error location. "

In regards to claims 33-34, please replace the limitation "The redundancy manager" (see line 1 of claims) to "The network".

Examiner's Statement of Reason for Allowance

Claims 18-25,27-31, and 33-36 are allowable over the prior art of records.

The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 18-25,27-31, and 33-36 are allowable over the prior

art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior arts.

The reason for allowance for claim 18 is the inclusion of the combination of a branching unit to: check a state of the first cable if the supply voltage is received at the second network connection and to check a state of the second cable if the supply voltage is received at the first network connection; and forward the supply voltage checked cable only if the checked cable has an error-free state, and the redundancy manager is to: feed a further supply voltage to the first line end if the supply voltage is fed to the second line end and is not detected at the first line end after lapse of a predetermined period of time by the redundancy manager; and feed the further supply voltage to the second line end if the supply voltage is fed to the first line end and is not detected at the second line end after lapse of the predetermined period of time by the redundancy manager in conjunction with the rest of the limitation set forth in the claim.

The reason for allowance for claim 31 is the inclusion of the combination of the redundancy manager to disconnect the first and second line ends from each other in an error-free state of the line; connect the first and second line ends in an error state of the line; feed a supply voltage into the first or second line end for supplying a user device connected to the network via a branching unit; feed a further supply voltage to the first line end if the supply voltage is fed to the second line end and is not detected at the first line end after lapse of a predetermined period of time by the redundancy manager; feed the further supply voltage to the second line end if the supply voltage is fed to the first line end and is not detected at the second line end after lapse of the

predetermined period of time by the redundancy manager; and a plurality of branching units and a recording unit for recording the timely behavior of a voltage or a current related to the supply voltage at the first or second line end during forwarding of the supply voltage by any of the branching units and for determining the number of branching units fed by the supply voltage up to a physical error location in conjunction with the rest of the limitation set forth in the claim.

The reason for allowance for claim 35 is the inclusion of disconnecting the first and second line ends from each other in an error-free state of the line; connecting the first and second line ends in an error state of the line; feed a supply voltage into the first or second line end for supplying a user device connected to the network via a branching unit; feed a further supply voltage to the first line end if the supply voltage is fed to the second line end and is not detected at the first line end after lapse of a predetermined period of time by the redundancy manager; and feed the further supply voltage to the second line end if the supply voltage is fed to the first line end and is not detected at the second line end after lapse of the predetermined period of time by the redundancy manager; detecting an open or short circuit in a segment of the network line within a branching unit on an intermediate portion of the network line, and disconnecting the segment from the network line automatically by the branching unit in conjunction with the rest of the limitation set forth in the claim.

The reason for allowance for claim 36 is the inclusion of wherein the redundancy manager connects the third port to the first port, connects the second line-terminating resistor to terminate the second end of the communication line, then monitors a voltage

received from the second end of the communication line for a threshold value indicating acceptable transmission of power through the communication line, and if the monitored voltage falls below a threshold value, the redundancy manager electrically connects the first and second ports together, and disconnects the second line-terminating resistor; wherein each branching unit monitors electrical current or voltage on said one or the other of the connected trunk lines, implements a state transition table to detect a short or open circuit in a failed said one or the other trunk line, and upon detecting the short or open circuit disconnects the failed trunk line, and connects the trunk-terminating resistor to terminate the communication line; and wherein if a given trunk line develops a short or open circuit, a branching unit connected thereto disconnects the given trunk line from the communication line, and the redundancy manager restores data/power to all of the branching units by connecting the first and second ports together, thereby communicating data and power on the communication line in two directions from the redundancy manager to reach all of the branching units in conjunction with the rest of the limitation set forth in the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emerson C. Puente whose telephone number is 571-272-3652. The examiner can normally be reached on 9-6 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on 571-272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Emerson C Puente/
Primary Examiner, Art Unit 2113